



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,889	09/12/2003	Mohamad El-Batal	LSI.76US01 (03-1070)	6947

24319 7590 08/08/2005
LSI LOGIC CORPORATION
1621 BARBER LANE
MS: D-106
MILPITAS, CA 95035

EXAMINER

DATSKOVSKIY, MICHAEL V

ART UNIT PAPER NUMBER

2835

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,889

Applicant(s)

EL-BATAL ET AL.

Examiner

Michael V. Datskovskiy

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/02/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: In line 12 the word "plurality should be removed (There is only one plurality of disk drives). Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5, 14, 19 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Neither drawings nor description comprise explanation of the fan capable for causing air to flow in the direction claimed in claims 5 and 19; or hard disks oriented such that one of small faces is perpendicular to the backplane (claims 14 and 28).

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1 and 15 and also claims 2-14 and 16-28 as dependent on them, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

Art Unit: 2835

particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 1 and 15 recites the limitation "said interface" in line 16 of claim 1 and line 14 of claim 15. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 6-8, 10-11, 13, 15-18, 20-22, 24-25 and 27 as best understood by examiner, are rejected under 35 U.S.C. 102(e) as being anticipated by Malcolm et al (US Patent Application Publication 2004/0105225 A1).

Malcolm et al teach a rack-mounted storage system, Figs. 1-3b, with multiple disk drives 11, comprising: a rectangular prismatic enclosure 19 with six substantially planar sides having at least two largest sides 17, 18, a primary access side 26 and an input/output side 20, said primary access side 26 not being one of said largest sides 17, 18 and said input/output side 20 being opposite of and substantially parallel to said primary access

Art Unit: 2835

side 26; a back plane 12 oriented parallel to said at least one of said two largest sides, said backplane 12 having a plurality of disk drive interface connectors 14 and at least one interface connector 15; a plurality of 2.5 inch factor disk drives 11 having an elongated rectangular prismatic shape mounting frame comprising two large faces and two small faces, one of said two large faces oriented perpendicularly to said backplane 12, each of said disk drives having a connector 13 plugged in one of said connectors 14; and said backplane 12 with said plurality of disk drives 11 being slidably engaged into an interface connector 23 and adapted to be removed from said enclosure through said access side as a single unit. Malcolm et al teach furthermore: Said storage system further comprises an interface mechanism engaged to said interface connector 23 and capable for transferring signals from said interface connector 23 to at least one input/output connector accessible from said input/output side 20, see paragraph [0012]; Said storage system further comprising at least one fan capable of causing air to flow from said primary access side to said input/output side (or in opposite direction, which inherently depends on the direction of rotation of the fan), see paragraph [0013].

Malcolm et al teach furthermore said storage system further comprising a frame 10 onto which are mounted said backplane 12 and said plurality of disk drives, said frame adapted to be slidably inserted onto said enclosure from said access side 26.

7. Claims 1, 9, 12, 14, 15 and 28, as best understood by examiner, are rejected under 35 U.S.C. 102(e) as being anticipated by Curtis et al (US Patent 6,650,533). Curtis et al teach a free-standing storage system, Figs. 1-7, with multiple disk drives 84, comprising: a rectangular prismatic enclosure 10 with six substantially planar sides

Art Unit: 2835

having at least two largest sides, a primary access side 20 and an input/output side 18, said primary access side 20 not being one of said largest sides, and said input/output side 18 being opposite of and substantially parallel to said primary access side 20; a back plane 22 oriented parallel to said at least one of said two largest sides, said backplane 22 having a plurality of disk drive interface connectors 26 and at least one interface connector; a plurality of 3.5 inch factor disk drives 82 having an elongated rectangular prismatic shape mounting frame comprising two large faces and two and one of said small faces is perpendicular to said backplane 22, each of said disk drives having a connector 44 plugged in one of said connectors 26; and said backplane 12 with said plurality of disk drives 11 being slidingly engaged into an interface connector of said enclosure 10 and adapted to be removed from said enclosure through said access side as a single unit.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malcolm et al or Curtis et al.

Malcolm et al and Curtis et al each teach all limitations of the claim except said hard disk is 1 inch factor disk drive. It would have been an obvious matter of design choice to install 1 inch factor disk drives, since applicant has not disclosed that the form factor of a

Art Unit: 2835

disk drive solves any stated problem or is for any particular purpose and it appears that the proposed invention would perform equally well with any size of hard disks.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ohanian (US patent 6,253,266) and Hsue et al (US Patent 6,833,995), each is being applicable for the rejection of the at least claims 1 and 15 of the instant application.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Datskovskiy whose telephone number is (571) 272-2040. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael V Datskovskiy
Primary Examiner
Art Unit 2835

08/04/2005